HSI HAVERFORD SYSTEMS INC
Custom Technology Integration

Conference Room Systems

Equipment, Technology and Systems for the High Tech Conference Room

800-486-5276

HuddleCam-HD™ 10X

USB PTZ Camera Manual

Please read this Manual before setting up and using the camera to ensure it's best performance.

www.HuddleCamHD.com

Providing USB Video Conferencing Solutions for the 21st Century

Precautions.....

Safety Tips.....

- Please read this manual carefully before using the camera.
- Avoid damage from stress, violent vibration or liquid intrusion during transportation, storage or installation.
- Take care of the camera during installation to prevent damage to the camera case, ports, lens or PTZ mechanism.
- Do not apply excessive voltage. (Use only the specified voltage.) Otherwise, you may experience electrical shock.
- Keep the camera away from strong electromagnetic sources.
- Do not aim the camera at bright light sources (e.g. bright lights, the sun, etc.) for extended periods of time.
- Do not clean the camera with any active chemicals or corrosive detergents.
- Do not disassemble the camera or any of the camera's components. If problems arise, please contact your authorized dealer.
- After long term operation, moving components can wear down. Contact your authorized dealer for repair.

Supplied Accessories.....

- 10x Zoom USB 3.0 HD Video Conference Camera (1)
- 12V/2.0A DC Power Adapter (1)
- Tripod Mounting System (1)
- Wall Installation Mounting System (1)
- Ceiling Mounting System (1)

- USB 3.0 Data Lines (3m), Serial Control Line, RS-232C to RS-485 Cable
- IR Remote Controller
- Control Cable (1)
- User Manual (1)

Rear Board Connectors

High Definition Interface:	USB 3.0
Control Signal Interface:	mini DIN-8 (VISCA IN, VISCA OUT/RS485)
Control Signal Configuration:	Dip-Switch Pin 7/TTL Signal; Baud Rate: 9600bps
Power Supply Interface:	DC 12V Socket

Electrical

Power Supply Adapter:	12V DC/2A
Input Voltage:	12V DC (10.5-14V DC)
Input Power:	24W (MAX)

Structure

Material:	Aluminum, Plastic
Dimensions (W x H x D):	4.88 in. (123.952mm) x 5.75 in. (146.05mm) x 4.75 in. (120.65mm)
Mass:	1.46 lbs. (0.67kg.)
Working Environment:	Indoor
Operating Temperature:	32°F (-0°C) to 113°F (+45°C)
Storage Temperature:	-14°F (-10°C) to 140°F (+60°C)
Color:	Silver Gray

Rear Board & Function.....

1. Front View.....

1. **Lens**

   10x Optical Zoom.

2. **IR Receiver**

   To receive IR remote controller signal.

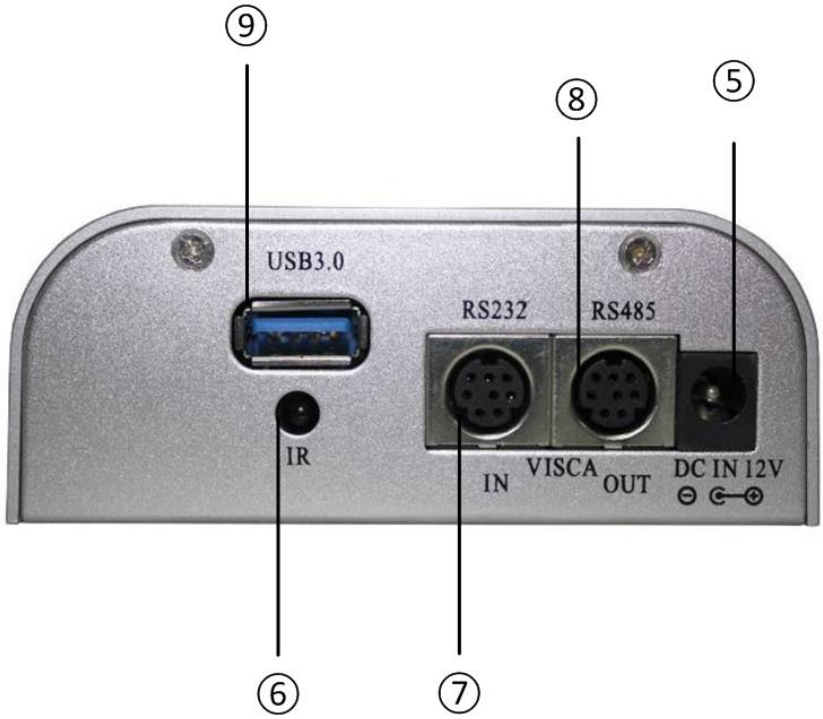
3. **Power LED**

   Blue LED blinks when unit is powered, Orange LED blinks for Stand-By status.

4. **IR Receiver**

   To receive IR remote controller signal.

2. Rear View.....



5. **DC IN 12V Socket**

   Only use the Power Adapter supplied with this camera.

6. **IR Receiver**

   To receive IR remote controller signals.

7. **VISCA IN Port**

   For hard wired remote control from a 3rd party PC, joystick, etc...

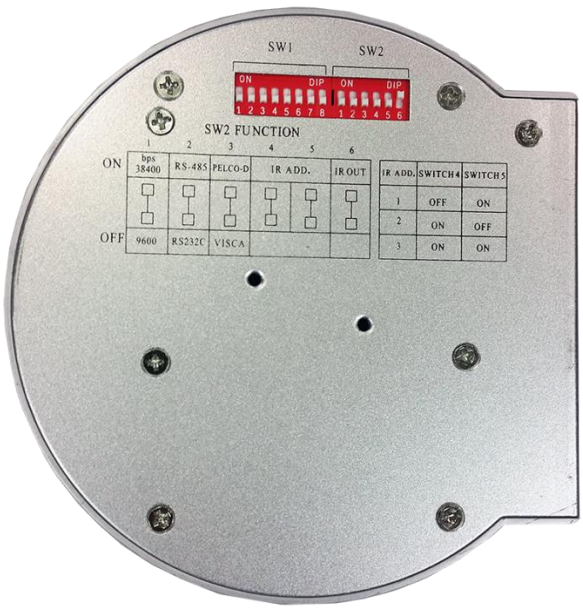
8. **VISCA Out Port/RS485**

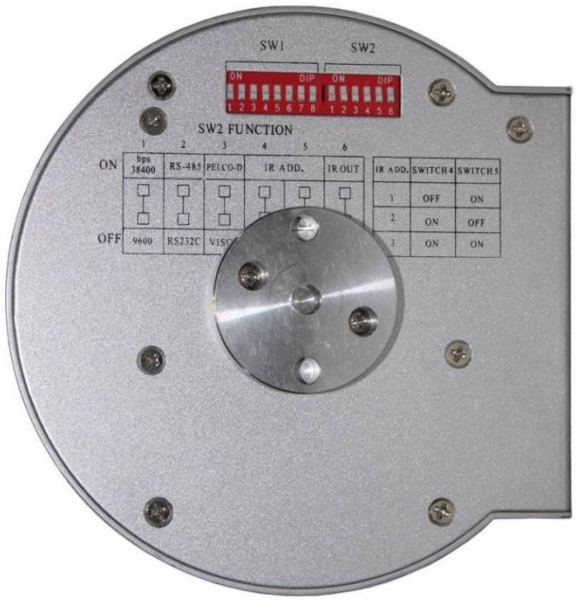
   Used for daisy chaining multiple cameras for RS-232 RS-485 control.

9. **USB 2.0 Interface**

   For connection to PC (USB 2.0 port. Will also function in a USB 3.0 port as USB 2.0 device).

3. Bottom View.....





1. **Tripod**

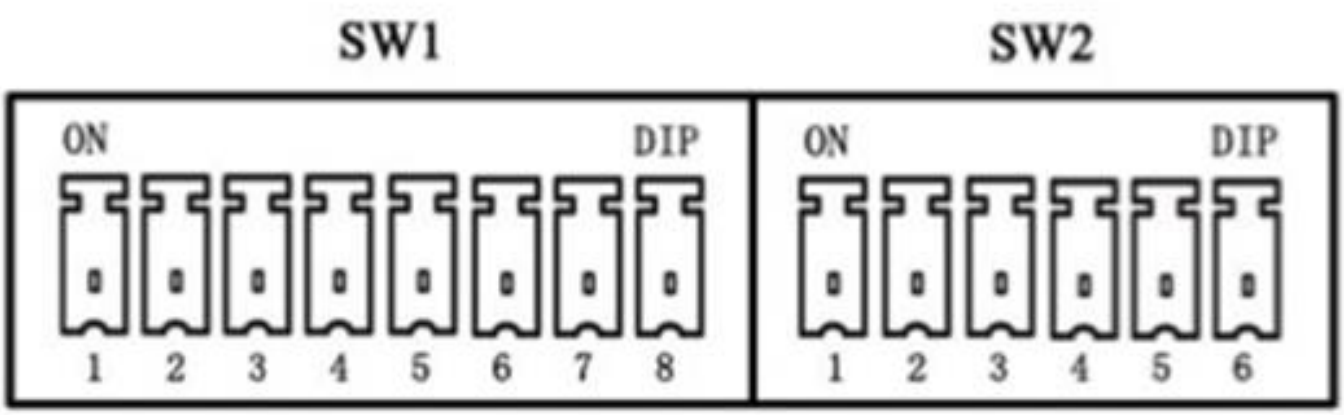
   Will accept 1/4-20 bolt from 3rd party tripod, wall or ceiling mount using included tripod adapter.

2. **Dip-Switch**

   Used for selecting serial and IR communications settings.

4. Dip-Switch Settings.....

Note: When changing Dip-Switch settings, make all changes with camera powered off.



SW1: Used for setting RS232 address.

Address	SW1 Switch State 1-7, (8 for stand-by)						
	DIP-1	DIP-2	DIP-3	DIP-4	DIP-5	DIP-6	DIP-7
1	ON	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF
3	OFF	OFF	ON	OFF	OFF	OFF	OFF
4	OFF	OFF	OFF	ON	OFF	OFF	OFF
5	OFF	OFF	OFF	OFF	ON	OFF	OFF
6	OFF	OFF	OFF	OFF	OFF	ON	OFF
7	OFF	OFF	OFF	OFF	OFF	OFF	ON

Notes:

1. **Broadcast address: If the Joystick is 255 (all dip switches on), any Camera can be controlled by any address.**
2. **Test Address: If the dome camera address is 0 (all dip switches off), any address code can control the dome camera.**

SW2: Used for communication settings.

SW2 DIP-1,2,3: Baud Rate, Communication Protocol

Baud Rate	SW2 DIP-1	Communication Mode	SW2 DIP-2	Communication Protocol	SW2 DIP-3
9600bps	OFF (Def)	RS-232	OFF (Def)	VISCA	OFF (Def)
38400bps	ON	RS-485	ON	PELCO-D	ON

SW2 DIP-4,5: IR Remote Control Receiving Address Table

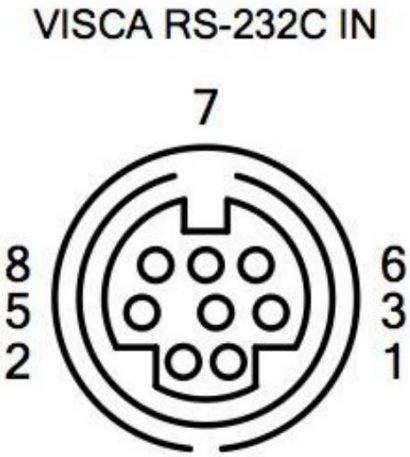
IR Remote Address	SW2 Switch State (4-5)	
	DIP-4	DIP-5
0	OFF (Def)	OFF (Def)
1	OFF	ON
2	ON	OFF
3	ON	ON

SW2 DIP-6: IR Output

IR Out	SW2 DIP-6
Disabled	OFF (Def)
Enabled	ON

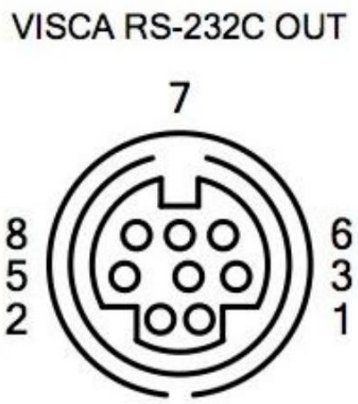
Cable Connection Info.....

VISCA RS-232C - IN Reference.....



Pin S/N	Function
1	DTR IN
2	DSR IN
3	TXD IN
4	GND
5	RXD IN
6	GND
7	IR Commander Signal OUTPUT
8	NO Connection

VISCA RS-232C - Out Reference.....



Pin S/N	Function	
	RS-232	RS-485
1	DTR OUT	TX+
2	DSR OUT	TX-
3	TXD OUT	
4	GND	
5	RXD OUT	
6	GND	
7		RS-485 -
8		RS-485 +

OSD MENU.....

On Screen Display Menu - Use the OSD menu to access and change the camera's settings.

Note: You cannot manually move the camera (pan/tilt) when the OSD menu is visible on the screen.

The Dome OSD Menu is as follows:

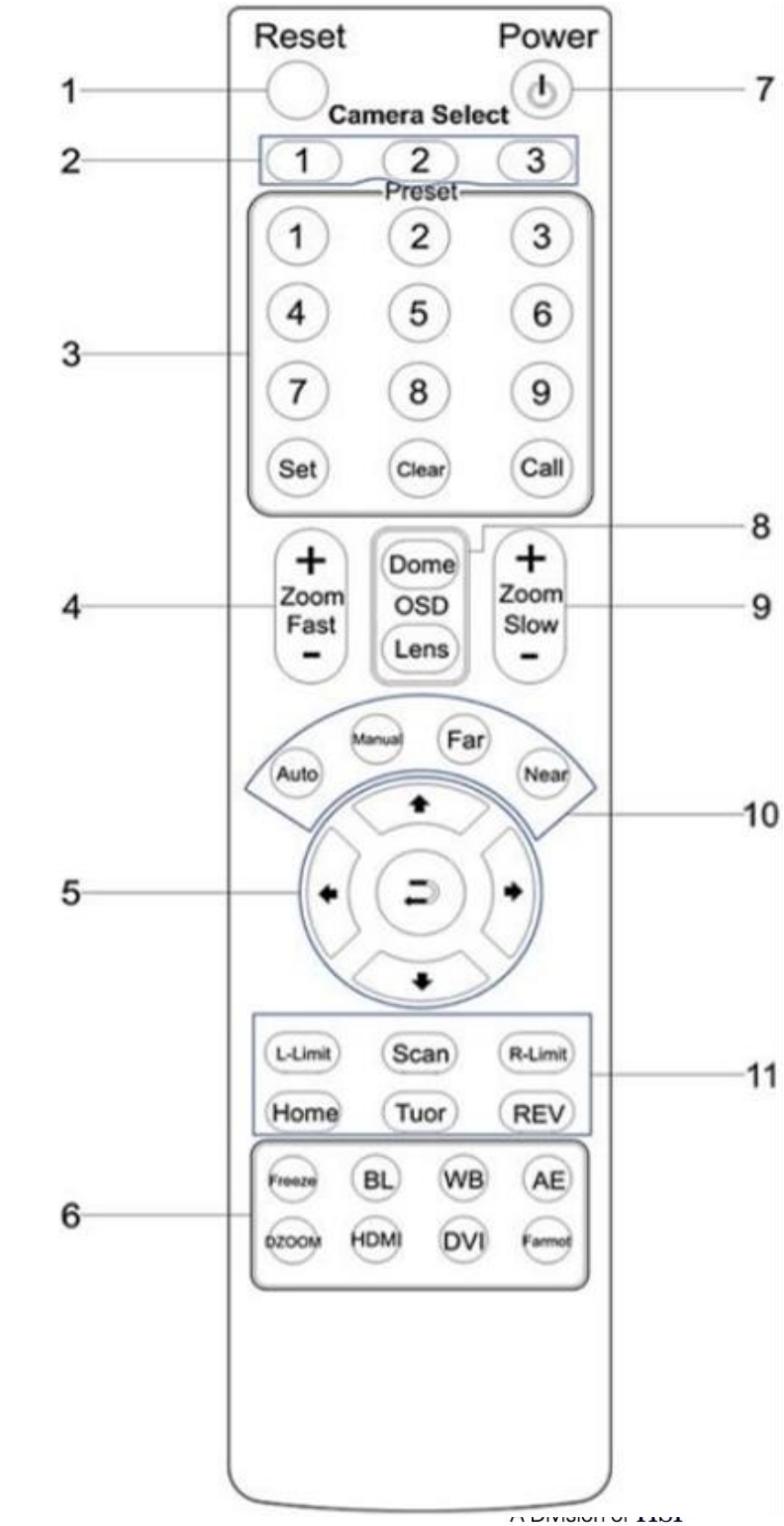
- **Pan Speed** **Default Value: 20**
  Set speed of Pan motor - Range = 1 - 63
- **Tilt Speed** **Default Value: 20**
  Set speed of Pan motor - Range = 1 - 63
- **Scan Speed (Auto Pan Mode)** **Default Value: 6**
  Set speed of boundary scan - Range = 1 - 63
- **Tour Path (uses presets)** **Default Value: 1**
  Select desired tour path - Range = 1 - 4
- **Tour Dwell** **Default Value: 5**
  Set duration to dwell on each preset - Range = 1 - 60
- **Proportion** **Default Value: On**
  Set Proportion - Range = On - Off
- **Auto Rev** **Default Value: P**
  Set camera mounting orientation - N for inverted ceiling mount
- **Frame** **Default Value: 60Hz**
  Set Refresh Rate - Range = 50Hz or 60 Hz

The Lens OSD Menu is as follows:

- **DISPLAY** — **Default Value: Off**
  On Screen Display = On or Off
- **SHARPNESS** — **Default Value: Low**
  Level of Sharpness:
  Low/Normal/High
- **SATURATION** — **Default Value: Normal**
  Level of Saturation
  Low/Normal/High
- **NR (Noise Reduction)** — **Default Value: 3**
  Adjustable Value: 0-5
- **WB (White Balance)** — **Default Value: Auto**
  Auto/Manual/Outdoor/Indoor/One Push/ATW
  (Manual Settings):
  - **R GAIN (Red Gain)** — **Default Value: 206**
    Adjustable Scope: 0-255
  - **B GAIN (Blue Gain)** — **Default Value: 150**
    Adjustable Scope: 0-255
- **AE (Auto Exposure)** — **Default Value: Auto**
  Auto/Manual
  (Manual Settings):
  - **SHUTTER** — **Default Value: 1/1**
    Shutter Speed Range: 1/1-1/10000
  - **IRIS** — **Default Value: Close**
    Close/F1.4-f22
  - **BRIGHT** — **Default Value: 0**
    Set Brightness 0 - 31

IR Remote Controller (**Note:** Some buttons do not operate for all camera models)

1. **Reset:**
   Restarts the camera and restores it to Factory Default settings.
   (**Note:** Will delete all memory).
2. **Camera Selection**
   Select Camera ID: 1, 2 or 3
3. **Preset Positions**
   1-9: Preset Positions
   Set: Setting Preset Position
   Clear: Clear Preset Position
   Call: Call Preset Position
   Note: If you want to set (or call) the first preset position to 1, you should press number key “1”, then press “Set” (or “Call”) to set (call) the position.
4. **Fast Zoom in/out Control Zone**
   +: Zoom in quickly
   -: Zoom out quickly
5. **Pan/Tilt Controller**
   Move Up
   Move Down
   Move Left
   Move Right
   Auto Pan
6. **Additional Function Zone**
   Freeze: Image Freeze
   BL: Back-light Compensation
   WB: White Balance
   AE: Auto Exposure
   D Zoom: Digital Zoom
   HDMI: Swap to HDMI video output
   DVI: Swap to DVI video output
   Format: Swap between different formats
7. **Power Supply Switch**
   Switch for turning camera on
   (i.e. Stand-By mode vs. Working mode)
8. **OSD Menu Zone**
   Dome OSD: Enter Pan Tilt Zoom OSD menu
   Lens OSD: Enter lens OSD menu
9. **Slow Zoom In/Out Zone**
   +: Zoom in slowly
   -: Zoom out slowly
10. **Focus Control Zone**
    Auto: Turn on auto focus
    Manual: Turn on manual focus
    Far: Set focus at farther distance
    Near: Set focus at nearer distance



11. **Pan/Tilt Function Zone**
L-Limit: Set left boundary limit scanning position
Scan: Enable Boundary Scanning (Auto Panning)
R-Limit: Set right boundary limit scanning position
Home: Go to camera's Home position
Tour: Enable automatic patrol tour of presets
Rev: Enable image flip for ceiling mounting

Connection Instructions.....

1. Connect included Power Supply to the camera.
2. Wait for camera to come to Home Position.
3. Connect included USB 3.0 cable to camera and USB 3.0 port of PC.
4. Select and configure camera in your software of choice.

NOTE: Failure to follow this sequence may result in no connection to PC.

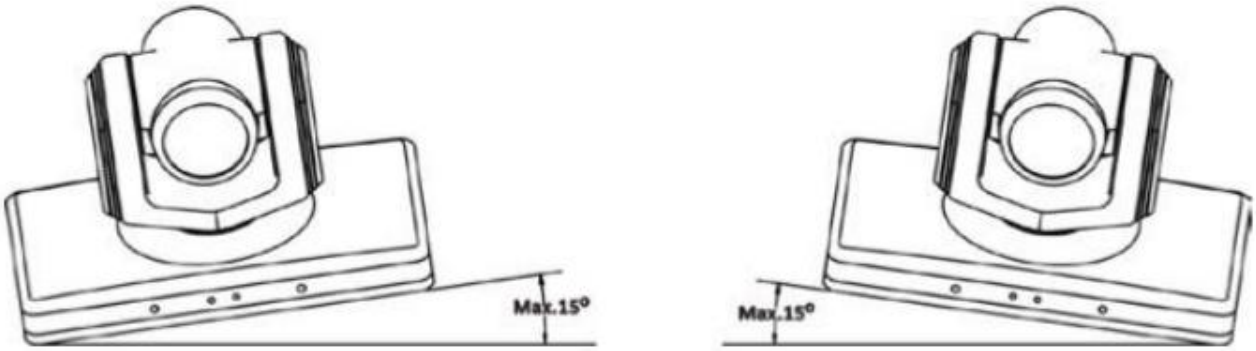
Care Of The Unit.....

Remove dust or dirt on the surface of the lens with a blower (commercially available).

Installation Instructions.....

Desktop Installation.....

When using the HuddleCam™ on a desk, Make sure that it will stand level. If you want to use the camera on an incline, make sure the angle is less than 15 degrees to ensure that the camera's pan and tilt mechanism operates normally.

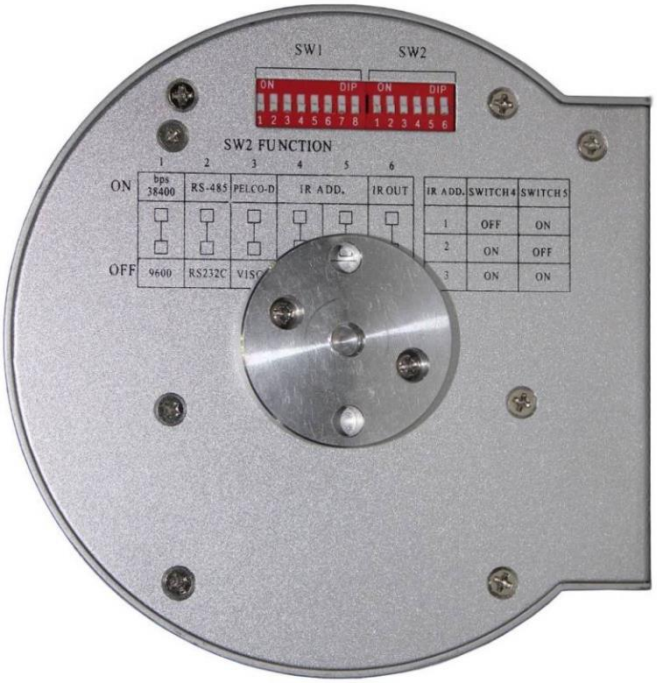


Tripod Installation.....

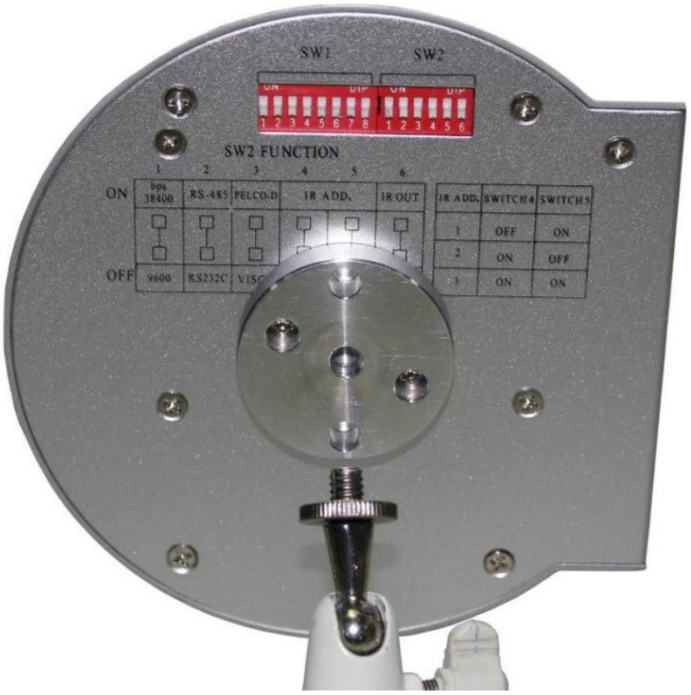
When using the HuddleCam™ with a tripod, screw the tripod to the bottom of the camera. The tripod screw must fit below specifications:

Note: Tripod must stand on a level surface.

To fix the tripod mount to the bottom of the camera, use the supplied screws to hold it in place.



Then screw the tripod to the tripod bracket.



Wall and Ceiling Mount.....

Wall Installation

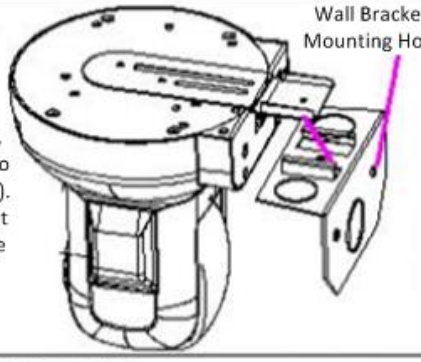
Step 1:

Remove two screws securing round tripod mount (step not shown) to bottom of camera body. Retain screws.

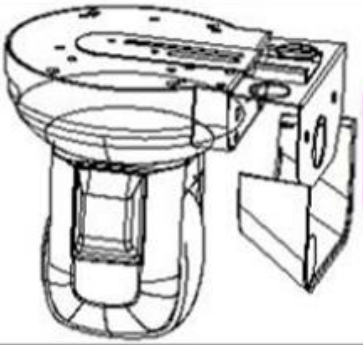
Reuse two screws to mount the camera bracket to the underside of the camera body.

Step 2:

Using plastic achors and screws provided, mount wall bracket to wall (step not shown). Insert camera bracket into wall bracket. Use screw provided to lock camera bracket to wall bracket.

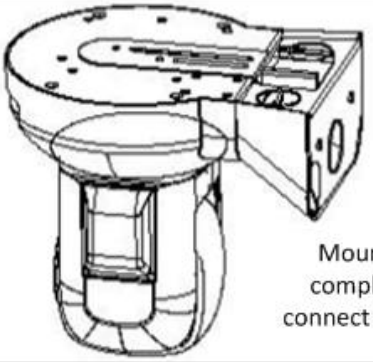


Step 3:



Slide decorative plastic cover onto wall bracket and snap into place.

Step 4:

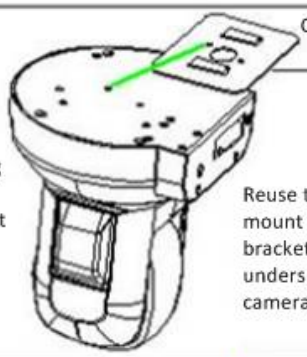


Mounting completed, connect cabling.

Ceiling Installation

Step 1:

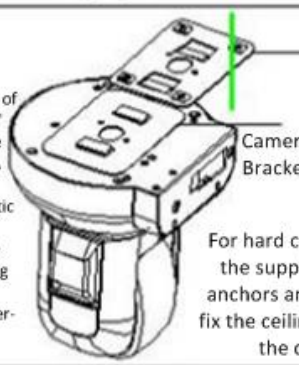
Remove two screws securing round tripod mount (step not shown) to bottom of camera body. Retain screws.



Reuse two screws to mount the camera bracket to the underside of the camera body.

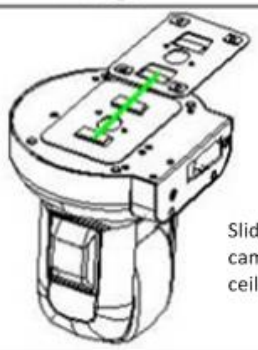
Step 2:

For acoustic tile ceilings – Cut a piece of plywood 12" x 23.75" to use as a tile bridge above the ceiling tile. Use the supplied screws (without plastic anchors) to fix the ceiling bracket to the plywood, sandwiching the ceiling tile in between. Do not over-tighten.



For hard ceilings - Use the supplied plastic anchors and screws to fix the ceiling bracket to the ceiling.

Step 3:



Slide camera and camera bracket into ceiling bracket.

Step 4:

Mounting completed, connect cabling.

Troubleshooting……

Problem	Cause	Resolution
There is no power to the camera.	Power adapter is disconnected from mains or from camera.	Check the connections between the camera, power adapter and mains. If anything is disconnected, reconnect it.
Camera will not connect to the PC via USB.	USB cable is bad.	Try new USB Cable
	Camera connects sometimes.	Connect USB only after camera has completely booted.
Camera unable to pan, tilt, and/or zoom.	Menu is currently displayed on the screen.	Retry after exiting the menu.
	Pan, tilt or zoom range limit was reached.	Try to pan/tilt/zoom in the other direction.
Remote control not working.	The “camera select” button on the remote control is not set to match the “IR address” set on the camera dip switch.	Choose the correct “IR select” number to match camera settings.
Camera cannot be controlled via VISCA.	The connection between the PC and camera is incorrect.	Refer to Cable Connection Info section of this manual.
	Commands being sent are incorrect.	Refer to VISCA manual.
The Camera is not working at all.	No response or image from camera.	Disconnect power, and wait a few minutes, then connect the power again. Retry.

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USB 3.0 | RS232 |Power

Camera Technical Specifications:

Resolution: Full HD 1920x1080 30FPS
Zoom: 10X Optical Zoom
Sensor: 1/3" CMOS, 2.1 MegaPixel
Field of View: 45° Degrees
Lens: f = 5 -50 mm F2.0-2.8
PTZ: 359° Pan, 240° Tilt
Video: USB 3.0
Control: RS-232 Visca In/out
Remote: IR Remote w/ Fast/Slow PTZ Controls
Presets: 64 Presets
Color: Silver/Black/White
Warranty: 1 Year

NEW USB Driver offers both Video and Control for more convenient control of the camera on PC directly. No need to connect by RS232!

Crestron/Extron
Control System

Soft Codec PC
Cloud Based Video Conferencing. (USB 3.0 for Video & USB 2.0 for Remote PTZ Control)

Priced at only $699 you cannot beat the 1080p video and dual purpose remote PTZ control/video connection driver.

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Part of the HuddleCamHD Camera Line

HUDDLECAMHD 10X

HuddleCamHD | 10X Optical Zoom | USB 3.0 | 1920x1080p

HUDDLECAMHD 18X

18X Optical Zoom USB 3.0 1920x1080p Camera

HUDDLECAMHD 20X

HuddleCamHD | 20X Optical Zoom | USB 3.0 | 1920x1080p

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